

# SOME NEW SPECIES OF MALLOPHORA MACQUART (ASILIDÆ, DIPTERA)

BY C. H. CURRAN

AMERICAN MUSEUM OF NATURAL HISTORY

Descriptions of a number of species of *Mallophora* which have been on hand for some time are presented in this contribution, together with a key to the species represented in the Museum Collection. It is impossible to include a number of the described species since the descriptions lack sufficient detail to make suitable comparisons.

The genus *Mallophora* is readily recognized by the obtuse claws, short ovipositor of the female, the appendiculate marginal cell and the bulbous face, which is clearly divided into an upper and lower section, the lower section with long bristles, pile on both, the upper section with much shorter sparse hair. The genus divides naturally into two groups, one having the face shining while the other has it thickly pollinose. There are about a hundred species described from the Neotropical region but it is possible that some of the names apply to different sexes of the same species. In some species the sexes are similar in coloration but in others there is a striking difference in the color of the hair on the legs. On the whole the color of the pile on the body is the same in both sexes although the females are more inclined to have scattered yellow hair on the under side of the abdomen. The best characters for the separation of the species, other than general coloration, are to be found on the legs of the males, which are very frequently strikingly ornamented with white or yellow pile in distinctive patterns.

The following key includes the Neotropical species in the Museum Collection.

## TABLE OF SPECIES

1. Scutellum black haired, at most a few pale hairs .....	29
Scutellum at least half yellow pilose .....	2
2. Abdomen wholly black haired .....	3
Abdomen usually with extensive yellow or reddish pile but sometimes only a lateral patch near the base, or with yellow pile beneath apically .....	4

3. Front with a band of pale yellowish pile; scutellum black pilose basally ..... *breviventris* Macquart  
Front and scutellum with reddish yellow pile; large species.  
*speciosa* Curran
4. Mesonotum wholly black haired ..... 5  
Mesonotum with yellowish pile, at least in front ..... 6
5. Apex of abdomen broadly reddish pilose ..... *bassleri*, n. sp.  
Apex of abdomen broadly black pilose ..... *infernalis* Wiedemann
6. Legs wholly black haired ..... *inca*, n. sp.  
Legs partly white or yellow pilose ..... 7
7. Scutellum with thick bright tawny pile, the abdomen almost uniformly orange pilose; large robust species (over 20 mm.).  
*rufiventris* Macquart  
Scutellum with thin reddish pile or yellow pilose, smaller and usually much more slender ..... 8
8. Posterior tibiae with appressed sparse pile, if somewhat dense the scutellar pile white ..... 14  
Posterior tibiae with dense erect pile, scutellar pile always yellow ..... 9
9. Posterior tibiae wholly black haired above ..... *ruficauda* Wiedemann  
Posterior tibiae pale pilose basally ..... 10
10. Face with black bristles ..... 11  
Face with wholly reddish yellow bristles and pile ..... *campestris*, n. sp.
11. All of the abdominal segments tawny pilose dorsally ..... *dana*, n. sp.  
Apical or preapical segments black pilose above ..... 12
12. First segment of posterior tarsi with white hairs in ♂, in ♀ posterior tibiae white haired basally ..... 13  
First segment of posterior tarsi wholly without white hairs, basal third of posterior tibiae of ♀ with pale yellow hair ..... *antica* Curran
13. First segment of posterior tarsus of ♂ broadly white haired on whole length, apex of abdomen of ♀ with sparse yellow hairs.  
*sexualis* Curran  
First segment with white hairs on apical half, apex of ♀ abdomen with scattered white hairs ..... *ajax*, n. sp.
14. Scutellum with white hair ..... *scopifer* Wiedemann  
Scutellum with yellowish pile ..... 15
15. Males ..... 16  
Females ..... 23
16. Posterior tarsi with only black hair on the basal segment ..... 17  
Posterior tarsi with some white or yellow hair on the first segment ..... 20
17. Third to fifth segments of posterior tarsi each with an apical row of long black bristles preceded by a tuft of very long erect white hair ..... *clavipes*, n. sp.  
Pile differently arranged ..... 18
18. Hair on posterior tarsi becoming longer and very dense on the fifth segment ..... 19  
Hair all short dorsally, the second to fourth segments with appressed white hair on the posterior half of the dorsal surface ..... *zita*, n. sp.

19. Posterior trochanters with fine yellowish hair ..... *abana* Curran  
 Posterior trochanters with long fine black bristles ..... *clavitarsis*, n. sp.
20. Posterior tarsi with white hair on the first segment ..... 21  
 Posterior tarsi with yellow hair on the first segment ..... 22
21. Posterior tibiae with white hair above, black hair in front.  
*nigritarsis* Fabricius  
 Posterior tibiae with black hair above and silvery white hair in front.  
*callida* Fabricius
22. Posterior tibiae yellow haired except at the apex ..... *fusca* Bromley  
 Posterior tibiae with sparse black hair in front on whole length.  
*neta*, n. sp.
23. Posterior tarsi black except sometimes the last segment ..... 25  
 Posterior tarsi all reddish ..... 24
24. Front tibiae with black hair anterodorsally; cheeks without black bristles ..... *callida* Fabricius  
 Front tibiae with yellow hair except below, the cheeks with a number of black bristles ..... *abana* Curran
25. Posterior tibiae with only a few black hairs apically ..... *neta*, n. sp.  
 Posterior tibiae with the apex broadly black pilose on part of the surface ..... 26
26. Posterior tibiae clavate apically and as large as the first tarsal segment ..... *clavipes*, n. sp.  
 Posterior tibiae not conspicuously swollen apically ..... 27
27. First segment of the posterior tarsi more than twice as long as wide ..... 28  
 First segment of the posterior tarsi broad, much less than twice as long as wide ..... *zita*, n. sp.
28. Apical abdominal segments practically all tawny haired above.  
*fusca* Bromley  
 Apical abdominal segments almost all black haired above.  
*nigritarsis* Fabricius
29. Face wholly pollinose ..... *ada*, n. sp.  
 Face mostly shining ..... 30
30. Abdomen with band of reddish or yellowish pile concealing the ground color or mostly pale pilose ..... 31  
 Abdomen wholly black haired or with only some scattered pale hairs apically on the under side or the apical segments with sparse appressed tawny pile ..... 40
31. Large species, wings blackish basally, brown apically with a very broad pale band across the middle ..... *tibialis* Macquart  
 Generally smaller, the wings not fasciate ..... 32
32. Legs wholly black pilose; wings blackish at the base.  
 ♀ \* *schwarzi* Curran  
 Legs with white or yellow pile ..... 33

\* *M. pluto* Wiedemann has the legs wholly black pilose but the wing is not dark at the base.

33. Anterior tarsi with white pile above ..... 34  
 Anterior tarsi devoid of white hair ..... 36
34. Anterior four tibiæ silvery white in front ..... ♂ *robusta* Wiedemann  
 Anterior tibiæ not silvery white though with some white hair ..... 35
35. Anterior tibiæ black pilose except in front ..... *aria*, n. sp.  
 Anterior tibiæ golden yellow pilose dorsally and posteriorly.  
*rufipes* Macquart
36. Wings yellowish brown, contrastingly black basally ..... ♂ *schwarzi* Curran  
 Wings almost uniformly colored ..... 37
37. Occiput above, and the front with yellow pile ..... 38  
 Occiput above, and the front wholly black haired ..... ♀ *robusta* Wiedemann
38. Pleura wholly black haired ..... 39  
 Pleura with considerable yellow pile ..... *pipiens*, n. sp.
39. Middle femora wholly black haired ..... *tolteca*, n. sp.  
 Middle femora with white hairs in front ..... *minos* Wiedemann
40. Wings dark brown with the apical fourth very pale brownish.  
*apicalis* Bromley  
 Wings almost unicolorous ..... 41
41. An incomplete band of yellow pile on the front of the mesonotum.  
*flavicollis* Bromley  
 Mesonotum with at most a few scattered pale hairs in front ..... 42
42. Abdomen with some appressed tawny hair above on the apical segments ..... 49  
 Abdomen without such hair ..... 43
43. Posterior tibiæ wholly black haired ..... 44  
 Posterior tibiæ with white or yellow hair ..... 46
44. Vertex yellow or white pilose ..... 45  
 Vertex with only black hair ..... ♀ *lugubris* Arribalzaga
45. A large patch of white hair below the eyes; face castaneous; legs wholly black haired ..... *vorax*, n. sp.  
 A very small patch of pale yellowish hair below the eyes; face black; middle femora yellow haired posteriorly ..... *lucida*, n. sp.
46. Anterior and middle tibiæ with dorsal stripe of dense silvery white pile ..... *lugubris* Macquart  
 Not so ..... 47
47. The white pile on the posterior tibiæ is on the apical third of the ventral surface, a little at the base ..... *curiosa*, n. sp.  
 The white pile does not extend beyond the apical third of the tibiæ ..... 48
48. The yellow beard extends to the palpi; anterior four tibiæ of male yellow pilose ..... *contraria* Walker  
 The yellow beard is confined to a small patch below the eyes; anterior legs wholly black pilose ..... *jeminâ*, n. sp.
49. Beard with white patch below the eyes ..... *nitidula* Hermann  
 Beard with yellow patch below the eyes ..... *cora*, n. sp.

## GROUP I

Face and front normally wide, the face shining, rarely in part thinly pollinose above. Robust species, rarely somewhat slender, usually with dense pile on the abdomen but the hair sometimes short and appressed on the disc. This is *Mallophora* in the strict sense.

***Mallophora bassleri*** new species.

Robust, black pilose, the scutellum and apex of abdomen with dark reddish pile. Length, 20 mm.

FEMALE.—Head black pilose, a small patch beneath the eyes and another behind the eyes above, yellow; face shining black, the sides yellowish pollinose; lower part of face, front and occiput with brown pollen, the posterior orbits broadly cinereous pollinose. Antennæ black, the second segment brownish red, the arista mostly yellowish; third segment long and pointed. Palpi wholly black haired.

Thorax dull black, with thin brown pollen, toward each side of the mesonotum with a broad interrupted more cinereous stripe which merges into brown, the usual broad median vittæ brownish. The pile is wholly black or there are a few scattered yellow hairs on the anterior margin of the mesonotum. Scutellum with long tawny pile, the base more or less broadly black haired.

Legs dark castaneous, the knees, anterior four femora except the apex and the coxæ black, the tarsi more reddish; hair and bristles wholly black, the posterior tibiæ with long dense pile above and below.

Wings brown, paler posteriorly, with violaceous reflections. Squamæ and halteres brown.

Abdomen with thick bright tawny pile, the sides broadly black pilose basally, the genitalia shining black and with thin tawny hair.

TYPES.—Holotype, female and paratype, female, Teffe, Brazil, October, 1928 (H. Bassler).

This species is colored very similarly to *rufiventris* Macquart but does not have the palpi yellow haired and differs in other respects.

***Mallophora inca*** new species.

Robust, mostly black pilose, the second abdominal segment with a band of yellow pile. Length, 20 mm.

FEMALE.—Head black, the facial orbits and occiput cinereous yellow pollinose, the lower part of the face and the front with brown pollen. Pile black, the posterior orbits rather broadly yellow pilose, the frontal pile mostly yellow, that on the upper part of the face and a few hairs on the upper part of the gibbosity yellow. Palpi black haired, the basal segment with mostly yellow, long dense hair. Antennæ black, the second segment

reddish, the arista reddish yellow; third segment long, pointed apically.

Thorax dull black with thin brownish pollen, only obscurely vittate. Pile black on the anterior border, extending to the middle medianly, the propleura, pteropleura and scutellum yellow.

Legs castaneous, the tarsi reddish; pile black, long and dense on the upper and lower surfaces of the posterior tibiae and on the posterior surface of the front tibiae; middle tibiae with sparse appressed yellow hair on the posterior surface, the middle coxae with yellow hair posteriorly.

Wings brownish, becoming dark brown basally, with violaceous reflection. Squamæ and halteres brown.

Abdomen with thick black pile, the second segment with a band of yellow pile extending over the sides, the pile on the venter more or less brownish; genitalia shining, with pale hairs apically.

**HOLOTYPE.**—Female, Rio Santiago, Peru, November 10, 1924 (H. Bassler).

**Mallophora campestris** new species.

Moderately slender, bristles pale except some on the femora. Length, 15 mm.

**MALE.**—Head brownish, the pollen whitish, reddish brown on the front; pile reddish yellow, yellow on the occiput, white on the proboscis. Face shining except on the sides. Palpi broadly reddish apically. Antennæ black, the second segment reddish, the third elongate and tapering to the apex, the arista a little longer than the third segment.

Thorax dull blackish, the pleura brown pollinose, the mesonotum with a pair of weak, broad, widely separated vittæ that are grayish in front of the suture and brown behind. Pile and bristles reddish yellow.

Legs reddish, reddish yellow pilose, posterior tibiae except at the base above, the under surface of the posterior femora and the basal two or three segments of the posterior tarsi with black hair, the apical two segments white haired above, the pile long and erect on the hind tibiae; femora with a few black bristles apically.

Wings with luteous tinge. Squamæ and halteres reddish.

Abdomen black, slightly metallic, with moderately thick tawny pile, the pile on the venter paler. Genitalia overlaid above with thick white hair.

**TYPES.**—Holotype, male, and paratype, male, Chapada, Brazil (Williston Collection).

**Mallophora dana** new species.

Moderately slender, mostly reddish pilose, the abdomen metallic above; beard white. Length, 15 to 16 mm.

**MALE.**—Head black, cinereous pollinose, the face bare except along the orbits and below; pile pale reddish, white on the lower half of the occiput, the face with a number of black bristles. Palpi broadly reddish apically, usually with a few black bristly hairs. Antennæ brown, the second segment

reddish, the third segment elongate, tapering, about as long as the arista.

Thorax black, brown pollinose, the mesonotum with a broad pale vitta anteriorly toward each side. Pile pale reddish, the mesopleura and sternopleura mostly black haired.

Legs reddish, the anterior four femora more or less broadly black basally on the anterior surface. Pile yellowish, black posteriorly on the femora, on the basal three segments of the posterior tarsi, on most of the posterior tibiae and on the broad apex of their femora; pile long and thick on the posterior femora, white dorsally on the basal fifth and on the apical two tarsal segments.

Wings with strong yellowish brown tinge. Squamæ and halteres brownish red.

Abdomen black, the third and following segments somewhat metallic, the pile moderately abundant, more dense basally and laterally, bright tawny, with some coarse black bristly hairs near the posterior border of the segments toward the sides, the shining black genitalia mostly overlaid with silvery white hair.

TYPES.—Holotype, male, Rio Maranon, Peru, November 1, 1924. Paratypes, four males, Iquitos, Peru, March, 1924, and one male, Achinameza, Peru, October 18, 1927. All were collected by Dr. Harvey Bassler.

***Mallophora ajax* new species.**

Scutellum and basal half of abdomen yellow pilose, all the segments of the posterior tarsi with white hair. Length, 18 mm.

MALE.—Head black, brown pollinose, the posterior orbits and sides of the face paler. Hair and bristles black but there is a narrow band of yellow pile behind the eyes which becomes almost white below, the fine hair is yellow on the upper half of the front, there is considerable yellow hair in the middle of the mystax below and the under surface of the palpi are yellow haired. Basal two antennal segments reddish, the third missing, the hair black, yellow on the upper half of the first segment.

Thorax dull blackish, with brown pollen, not distinctly vittate, the humeri and posterior calli brownish. Hair black, but there are some scattered yellow hairs on the anterior half, particularly inside the humeri. Scutellum wholly yellow pilose.

Legs dark reddish, black haired, the posterior tibiae with moderately long hair on the apical half above, with white hair on the basal half except ventrally, the white hair extending to the apical sixth on the posterior surface; posterior femora with white hair below on the apical third, the anterior four tibiae and tarsi with bright yellow hair except ventrally. The posterior tarsi are not broadened, blackish, with long erect white hair above on the second and third segments on the anterior two-thirds and some white hair on the first segment; the two apical segments are missing but undoubtedly bear long erect white hair as on the third segment.

Abdomen black, the basal three segments and genitalia with yellow pile, the under surface of the apical segments with some scattered yellow hairs; genitalia overlaid with silvery white pile. The black pilose apical segments are rather dull.

FEMALE.—The facial gibbosity is reddish brown and bears only a few yellow hairs, there is almost no yellow hair on the front and the yellow pile on the palpi is limited to little more than the basal half. Legs castaneous, black haired, the anterior tibiæ and tarsi with sparse yellow hair above, the posterior femora and tibiæ as in the male but with shorter hair. The genitalia and last sternite have yellowish white hair.

TYPES.—Holotype, male, and allotype, female, Brazil.

This species is close to *sexualis* but may be distinguished by the characters given in the key. The hair on the legs of the female is shorter and less abundant. It is impossible to identify *opposita* Walker and *ciliata* Walker, which may be the two sexes of the same species. One of these names may apply to the species I have described as *antica*, *sexualis* or *ajax*—but this can only be determined by examination of the types.

**Mallophora aria** new species.

Black, the abdomen thickly reddish pilose above; front tibiæ and tarsi with some white hair. Length, 20 mm.

MALE.—Head black, the front, cheeks and occiput brown pollinose, the sides of the face and posterior orbits with cinereous yellow pollen. Mystax yellow, with fine black bristles on the sides, the hair on the upper part of the face mixed black and yellow; front black haired, the vertex, a narrow band along the posterior orbits and the cheeks with yellow pile. Palpi castaneous, with yellow pile below and black above. Antennæ with the two basal segments reddish, with black hair, the third missing.

Thorax opaque black, with brown pollen laterally, on the pleura and on the scutellum, the hair wholly black; scutellum with a few isolated reddish hairs.

Legs blackish, the anterior four femora castaneous below, the posterior pair on more than the lower half and the upper half of the posterior tibiæ on about the basal half, reddish. Pile black on the front legs except for an entire broad anterior stripe of sparse appressed white hair on the tibiæ and appressed white hair on the anterior half of the upper surface of the tarsi; middle femora with sparse yellow hair posteriorly, their tibiæ with yellow hair on the basal half above and on the whole posterior surface; posterior femora with yellow hair ventrally and anteriorly, their tibiæ with yellow hair on the basal half and the whole posterior surface; posterior tarsi considerably broadened, the second to fourth segments with white pile above, the hair subappressed.

Wings pale yellowish brown. Squamæ with black fringe. Halteres brownish red.

Abdomen thickly reddish pilose above, reddish yellow pilose on the sides and venter but the immediate base black haired. Genitalia shining black, with yellow hair, the hair thick above on the base.

**HOLOTYPE**.—Male, Rio Santiago, Peru, November 12, 1928 (H. Bassler).

**Mallophora pipiens** new species.

Black, the abdomen thickly reddish yellow pilose; tarsi wholly black haired. Length, 18 mm.

**MALE**.—Head black, the cheeks and front brown pilose, the facial orbits and occiput with cinereous yellow pollen. Mystax yellow with black bristles laterally, the upper part of the front and the occiput yellow pilose. Palpi castaneous, yellow pilose, with some black bristles. Antennæ black, the arista reddish yellow, about as long as the third segment; hair black.

Thorax opaque black, the pleura and scutellum with some dark brown pollen, the hair black; mesopleura with two patches of yellow hair, the hypopleura almost all yellow pilose; scutellum with a few scattered yellow hairs.

Legs dark castaneous; anterior legs black haired, the femora with yellow hair behind; middle legs with rather sparse yellow hair, the dorsal surface black haired; posterior femora with moderately long yellow hair but with thick black hair on the apex except below; posterior tibiæ with dense hair above and below, black, yellow on the basal fourth, extending to the middle on the posterior surface. Posterior tarsi somewhat broadened, wholly black haired.

Wings brownish. Squamæ with black fringe. Knob of halteres brown.

Abdomen thickly reddish yellow above, becoming yellow on the venter and more tawny toward the apex, the first segment with black pile posteriorly on the sides. Genitalia short, shining black, with a few black bristles basally, the pile yellow.

**HOLOTYPE**.—Male, Surinam, January 23, 1939 (D. C. Geijskes).

**Mallophora tolteca** new species.

Robust, black, the abdomen with pale orange pile. Length, 19 mm.

**MALE**.—Head black, facial orbits, cheeks and occiput densely cinereous pollinose, the front yellowish brown; facial gibbosity reddish; mystax yellow with black bristles laterally, the hair on the upper part of the face almost all black. Front with black hair in front and yellow hair behind; occiput black haired, with an orbital band of yellow pile which becomes white below, the pale beard extending to the oral margin. Palpi castaneous, wholly black haired. Antennæ with the first segment castaneous, the others missing.

Thorax dull black, the pleura with brown pollen; hair wholly black. Scutellum reddish brown, wholly black haired.

Legs castaneous, black haired; anterior surface of the posterior femora and lower surface of the posterior tibiæ on the basal third with pale yellow pile. Hair of the posterior tibiæ long and dense. Posterior tarsi not broadened, the first segment with long hair.

Wings light brownish. Squamæ with black fringe. Knob of halteres brownish.

Abdomen with the first and second segments black haired, the apex of the second and basal half of the third with yellow pile, the remainder of the abdomen orange pilose. Genitalia wholly yellow haired. Venter black pilose on basal half.

HOLOTYPE.—Male, British Honduras, October, 1928.

**Mallophora vorax** new species.

Robust, black, the abdomen shining; pile almost wholly black. Length, 16 mm.

MALE.—Face brownish red, its narrow orbits and the posterior orbits cinereous pollinose, the latter black pilose except close to the eyes, where the pile is very pale yellow, the beard pure white. Mystax composed of black bristles with a few white ones in the middle, the hair on the face whitish; front with yellow hair. Palpi reddish, black haired, the apical segment with white hair on the broad base. Antennæ with the first segment reddish, the second brown, the third missing.

Thorax dull black, the humeri and posterior calli brownish red, the pleura brown pollinose; pile wholly black; scutellum thickly brown pollinose. There is a little brown pollen on the mesonotum but it does not form a conspicuous pattern.

Legs shining brownish red, wholly black haired; the hair long and dense on the upper surface of the posterior tibiæ.

Wings yellowish brown, paler apically and posteriorly. Knob of halteres brown.

Abdomen shining black, thinly haired above, the broad sides and the apices of the second to fifth segments with brown pollen, the venter with reddish brown pollen. Hair black, a few yellow hairs on the genitalia.

HOLOTYPE.—Male, Lima, Peru, April 30.

**Mallophora lucida** new species.

Robust, black, almost wholly black haired. Length, 24 mm.

FEMALE.—Head black; the pollen brown; hair black, the front and the very narrow posterior orbits yellow pilose, the beard black with a very small pale yellow patch below the eyes; mystax with just a few yellow bristles and some yellow hairs. Palpi castaneous. Antennæ black, the third segment long and tapering, twice as long as the reddish arista.

Thorax dull black, wholly black haired, the pleura and scutellum with dark brown pollen.

Legs castaneous, the tarsi more reddish; hair black, dense on the posterior tibiæ, yellow on the posterior surface of the anterior four femora.

Wings brown with violaceous reflections. Knob of halteres brownish red.

Abdomen dull black, the broad sides and venter with brown pollen; hair black; genitalia shining black, with mostly yellow hair.

**HOLOTYPE.**—Female, Posadas, Argentina.**Mallophora curiosa** new species.

Black, beard yellow, posterior tibiæ with white pile on apical half of ventral surface. Length, 20 mm.

**MALE.**—Head black, with brown pollen; hair black and yellow, middle of mystax with black bristly hairs intermixed. Palpi reddish, yellow pilose, with black bristles on apical third; proboscis with black hair below. Antennæ brown, the third segment missing.

Thorax dull black, the pleura and scutellum brown pollinose. Hair black, the disc of the mesonotum with considerable reddish brown hair intermixed with the black.

Legs castaneous, the femora darker, hair black, the posterior tibiæ with long white pile on the apical half of the ventral surface and sometimes with a little yellow hair at the base; posterior femora with yellow hair on the apex, extending to the apical fourth on the under surface; tip of middle femora and anterior and posterior surfaces of the middle tibiæ on the basal half with yellow hair; posterior tarsi with long white hair on the anterior half or more of the apical four segments and on the anteroventral surface of the first segment; pile long and dense on the posterior tibiæ.

Wings light brownish. Halteres brownish red.

Abdomen shining black, the narrow sides and venter with brownish pollen; hair black, the venter sometimes with a few scattered yellow hairs. Genitalia shining black, with a few yellow hairs at the base of the upper surface.

**TYPES.**—Holotype, male, and paratype, male, Nova Teutonia, Brazil, January 28, 1939, and February 6, 1939 (F. Plaumann).

**Mallophora jemima** new species.

Robust, dull black, with very little pale pile. Length, 19 mm.

**MALE.**—Head black, with brown pollen, the narrow facial and posterior orbits more yellowish; hair black, a very narrow band of yellow pile behind the eyes ending in a small whitish patch below the eyes, the fine hairs of the mystax and some scattered hairs on the face and front yellow. Palpi and antennæ black, the first antennal segment with yellow hair below, the third missing.

Thorax opaque black, the pleura and scutellum with dark brown pollen, the hair wholly black.

Legs dark castaneous, black haired; posterior femora with a large patch of white hair anteriorly beyond the middle, their tibiæ with white hair beneath on the basal two-thirds; the pile long and dense on the hind tibiæ.

Wings brown, with strong violaceous reflections. Halteres reddish and brown.

Abdomen dull black, a little shining apically, the hair black, yellow on the upper surface of the genitalia but there is no dense brush of hair.

**HOLOTYPE.**—Male, Sao Paulo, Brazil (E. Lefevre), received from Count A. A. Barbiellini.

**Mallophora cora** new species.

Black, with black and brownish red hair; rather slender species. Length, 15 to 16 mm.

**FEMALE.**—Head black, cinereous pollinose, brown on the front and cheeks, the face shining. Hair and bristles wholly black except very narrowly yellow along the posterior orbits, the beard black. Palpi reddish on the apical half, black basally, with some yellow hair basally. Antennæ black, the second segment reddish, the arista brown, longer than the third segment.

Thorax black, brown pollinose, with a pair of broad short brownish yellow vittæ on the dorsum extending from near the front margin to behind the middle. Hair wholly black.

Legs castaneous or brownish red, the tarsi more reddish, the anterior four femora mostly blackish or shining dark brown. Hair black, dense on the upper surface of the posterior tibiæ; yellow on the coxæ and trochanters.

Wings brown, more yellowish brown on the apical third or more. Halteres reddish, sometimes with the knobs brown.

Abdomen shining black, somewhat metallic, the sides and venter with brown pollen. Hair thin, black, appressed dorsally, tawny on the disc of the apical tergites and genitalia, and on the apical sternites and sometimes mostly tawny on the sides of the first segment.

**TYPES.**—Holotype, female, and paratypes, seven females, Chapada, Brazil (Williston Collection).

In one of the specimens there are about a dozen yellow bristly hairs in the lower part of the mystax.

This species is close to *nitidula* Hermann but has less tawny pile on the abdomen and the males of the two species may be quite different. In the male of *nitidula* the sides of the abdomen are tawny pilose.

#### GROUP II

Rather slender species, never robust, the face always wholly pollinose, the ground color almost all concealed or visible only in certain views, the face and front generally narrow, rarely as broad as in typical forms. Pile thin, never concealing the ground color, always appressed on the dorsum of the abdomen.

This group closely approaches *Promachina* Bromley, differing in the shape of the ovipositor, which here is quite as in the typical *Mallophora*. One of the species, *clavipes*, has the male genitalia elongate as in *Promachina*. It seems impossible to separate *Pro-*

*machina* and the present group except on the character of the ovipositor. The width of the face and front, a character I have previously used, is of little value. Possibly the species included here would be better placed in *Promachina*. At any rate they form a natural link between this genus and the typical *Mallophora*.

In addition to the species described in the following pages, *nigritarsis* Fabricius, *abana* Curran, *callida* Fabricius and *fusca* Bromley belong in this group.

***Mallophora clavipes* new species.**

Rather slender species, the mesonotum with cinereous pollen, the posterior tibiæ conspicuously swollen apically. Length, 19 to 20 mm.

MALE.—Head black, yellowish pollinose, the posterior orbits more cinereous; pile tawny, yellowish on the lower occiput and beneath the eyes, black on the front, and there are black bristles along the sides of the mystax and on the cheeks; gibbosity reddish in ground color. Antennæ black, the second segment reddish basally, the third about half as long as the arista.

Thorax black, with cinereous pollen, not vittate, the mesopleura light brownish; pile tawny, black on the mesonotum except in front; scutellum with black bristles and tawny hair.

Legs reddish yellow, the posterior tarsi and the apical fourth of their tibiæ black; anterior four femora with broad, black anterodorsal stripe. Pile tawny, black anteriorly and ventrally on the anterior four femora, anteriorly and apically on the posterior tibiæ and on the posterior tarsi. Apical four segments of the posterior tarsi with long erect black bristles apically preceded by a tuft of long white hairs, the basal segment with a pair of long black bristles apically; posterior tibiæ very conspicuously swollen at the apex.

Wings light yellowish brown, darker along the costa. Squamæ with tawny fringe. Halteres reddish.

Abdomen dull black, the sides and venter cinereous yellow pollinose, the pile reddish yellow, black on the disc of the sixth and following segments and mostly black on the shining black genitalia.

FEMALE.—Pile generally somewhat paler; palpi with mixed tawny and black hair. Posterior tibiæ less swollen apically; all the tarsi with black hair. Third and following abdominal segments with triangles of black hair on the disc.

TYPES.—Holotype, male, and allotype, female, Chapada, Brazil (Williston Collection).

Both sexes are readily identified by the clavate tibiæ. The male genitalia are elongate and somewhat clavate.

**Mallophora zita** new species.

Slender, the pollen brownish yellow; posterior tarsi broadened and with appressed hair. Length, 19 to 21 mm.

MALE.—Head black, the face mostly yellowish; pollen dense, reddish yellow, more cinereous on the posterior orbits; pile reddish yellow, bristles on the cheeks, along the sides of the mystax and on the front black; pile of the occiput becoming whitish below. Palpi with a few black bristles. Antennæ brown, the second segment reddish and with a few black hairs above; third segment obtuse apically, a little more than half as long as the arista.

Thorax with brownish yellow pollen, obscurely vittate, the hair bright yellowish, sparse and black on the posterior half of the disc of the mesonotum; usually no black hairs on the cinereous pollinose scutellum.

Legs pale reddish, with thin bright yellowish pile, the anterior four femora ventrally, the posterior pair apically, the posterior tibiæ anteriorly and on the apical fourth except below, and the posterior tarsi black haired; posterior tarsi greatly broadened, with appressed hair, the second to fifth segments each with a patch of white hair on the posterior half. Anterior four femora with broad anterior shining black stripe.

Wings yellowish brown. Squamæ reddish, with yellow fringe. Knob of halteres black.

Abdomen dull black, the sides yellowish brown pollinose, the venter cinereous. Pile short, black, yellow on the sides, basal two segments, venter and under side of genitalia, the latter overlaid by silvery white pile.

FEMALE.—The tarsi are wholly black haired and the black hair on the posterior tibiæ may be greatly reduced on the basal two-thirds; third abdominal segment mostly yellow pilose. The genitalia without black hair.

TYPES.—Holotype, male, and allotype, female, Achinamiza, Peru, February 18, 1927. Paratype, Rio Santiago, Peru, March 20, 1927. All were collected by Dr. Harvey Bassler.

**Mallophora clavitarsis** new species.

Slender, with yellowish brown pollen, the mesonotum vittate; posterior tarsi with hair becoming longer and dense apically. Length, 17 mm.

MALE.—Head with yellowish brown pollen, the occiput cinereous white; face mostly reddish in ground color, with black hair and bristles, some pale yellow pile in the lower part of the mystax. Front with black hair, the occiput with yellow pile above which becomes whitish below. Palpi castaneous, with yellow hair basally and coarse black hair on the apical half. Antennæ with the basal segment reddish and with black hair, the others missing.

Thorax with brown pollen, the mesonotum with three more yellowish dorsal vittæ and the sides pale, the pleura more grayish posteriorly. Hair black, yellow on the scutellum, anterior border of the mesonotum and mostly yellow on the posterior half of the pleura. Scutellum with cinereous yellow pollen.

Legs reddish yellow, the posterior tarsi black, their tibiæ darkened apically, the anterior four femora with broad shining black stripe anterodorsally.

Pile reddish yellow, black on the posterior tarsi, anteriorly and ventrally on the anterior four femora and on the anterodorsal surface and apex of the posterior tibiae; posterior femora with long fine black bristles on the basal half. Posterior tarsi moderately broad, with dense moderately long black hair on the anterior half of the apical three segments and each with a small median tuft of white hair.

Wings light brownish, darker anteriorly, with violaceous reflection. Fringe of the squamæ black and yellow. Halteres reddish.

Abdomen dull black, with yellow pile, the disc of the fifth to seventh segments with appressed black hair, the venter with scattered black hairs intermixed with the yellow. Sides of the abdomen narrowly brown pollinose basally, the venter with obscure brownish pollen. Genitalia short, shining black, the hair mostly yellow, the upper surface with black hair on the basal half.

**HOLOTYPE.**—Male, Rio de Janeiro, Brazil, November (Williston Collection). The ornamentation of the tarsi is characteristic of this species.

***Mallophora neta*** new species.

Slender, brownish yellow pollinose, the mesonotum distinctly vittate; posterior tarsi of the male with a broad stripe of brassy yellow pile. Length, 14 to 17 mm.

**MALE.**—Head black, the lower half of the face reddish; pollen cinereous on the occiput, reddish yellow on the face and front; pile tawny, yellow on the lower part of the occiput; sides of the mystax and cheeks with black bristles. Antennæ black, the second segment reddish basally, the third moderately long, two-thirds as long as the arista; hair black, the outer side of the first segment with tawny hair.

Thorax with brownish yellow pollen and with three broad, dark vittæ dorsally, the pleura more brownish above and grayish behind. Pile reddish yellow, mostly black and coarse on about half of the disc of the mesonotum. Scutellar pile all pale.

Legs orange, the posterior tarsi and very broad stripes on the anterior four femora black. Pile tawny, black on the anterior and ventral surfaces of the anterior four femora, on the anterodorsal surface of the posterior tibiae and on the broad sides of the posterior tarsi. Posterior tarsi broad, with a very broad stripe of brassy yellow pile extending from the base to apex on the anterior half.

Wings pale brownish. Squamæ with yellow fringe. Knob of halteres brown.

Abdomen dull black, pale yellow pilose, the pile becoming tawny apically, particularly on the disc; sides obscurely yellowish brown pollinose, the venter with grayish pollen and yellow pile. Genitalia shining black, with a few black bristles above, overlaid on the basal half with white appressed hair.

**FEMALE.**—The posterior tibiae may entirely lack black hair and the posterior tarsi are wholly black haired.

TYPES.—Holotype, male, and allotype, female, Rio Santiago, Peru, November 25 and 20, 1924. Paratypes: female, Rio Santiago, Peru, November 11, 1924, three females, Iquitos, Peru, 1923 and March 15, 1924; male and female, Middle Rio Ucayali, Peru, September 23, 1924. All collected by Dr. Harvey Bassler.

**Mallophora ada** new species.

Slender, with brownish pollen, the mesonotum weakly vittate. Length, 15 to 20 mm.

MALE.—Face mostly reddish in ground color; pollen yellowish, more cinereous on the occiput, brown on the front. Pile yellowish, the beard paler; mystax yellow, bordered with black bristles; front black haired, the upper part of the face with mostly black hair; a row of black bristles on the upper half of the occiput well back from the eyes. Palpi black, with yellow bristles below and black above. Antennæ blackish, the second segment mostly reddish, the hair black; third segment two-thirds as long as the arista.

Thorax black, brown pollinose, the pollen becoming more grayish on the lower part of the pleura, on the mesonotum more reddish brown, with three broad darker vittæ. Hair black, yellow on the lower half of the pleura.

Legs reddish yellow, the tarsi reddish; posterior tarsi (except the fifth segment) very broad, complete dorsal stripes on the anterior four tibiæ and the apex of the posterior tibiæ blackish, the posterior femora darkened above for about half their length. Femora with black hair, the anterior pair with some tawny hair posteriorly; tibiæ with bright reddish yellow pile, the middle and hind pair mostly black haired anteriorly; posterior tarsi with the fourth and fifth segments with long white hair above, the second and third with white hair on the anterior half, the basal segments otherwise black-haired; middle tarsi mostly black haired but most of the dorsal bristles are tawny.

Wings pale yellowish brown. Squamæ with black fringe. Halteres reddish, sometimes with brownish knob.

Abdomen dull black, the sides brown pollinose; pile black above, sparse, bright yellow on the sides and venter which is cinereous yellow pollinose. Genitalia shining black, with black hair, the basal half overlaid above with dense white hair.

FEMALE.—Posterior tarsi without white hair; abdominal pile shorter; genitalia with black hair only.

TYPES.—Holotype, male, allotype, female, and paratypes, five males and one female, Rio de Janeiro, Brazil (Williston Collection).